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ASSIGNMENT BOOKLET

0704 Science 7
Module 1

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1. BEFORE MAILING YOUR ASSIGNMENT BOOKLET PLEASE SEE THAT:

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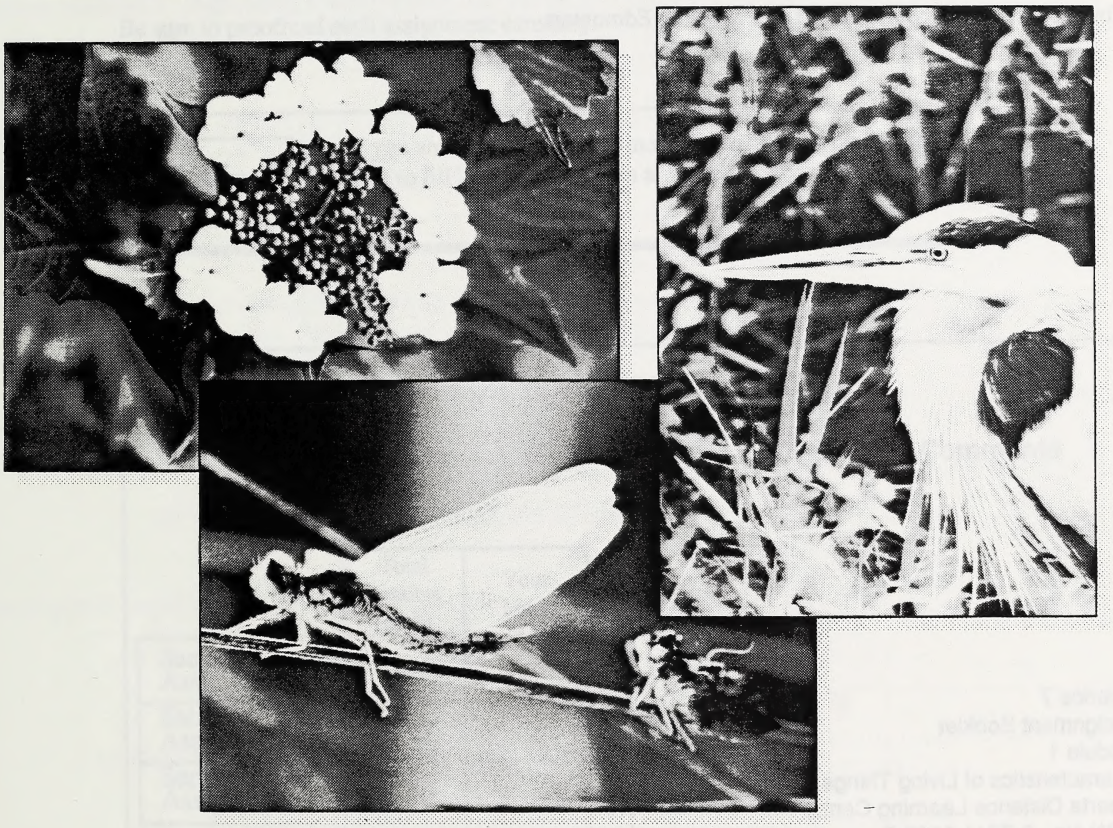
SCIENCE 7

ASSIGNMENT BOOKLET



MODULE 1:
CHARACTERISTICS OF LIVING THINGS

Distance Learning

Alberta EDUCATION

ACKNOWLEDGEMENTS

This module has been based on **Science Directions 7** by John Wiley & Sons/Arnold Publishing Ltd., 1989. Program consultant was Douglas A. Roberts. The author team for the complete text included: Wilson C. Durward, Eric S. Grace, Gene Krupa, Mary Krupa, Alan J. Hirsch, David A.E. Spalding, Bradley J. Baker, Sandy M. Wohl. Contributing author was Jean Bullard. Portions of **Science Directions 7** have been used throughout the Assignment Booklet and have been adapted in a variety of ways.

Cover photographs courtesy of Dave Mussell, Edmonton.

Science 7
Assignment Booklet
Module 1
Characteristics of Living Things
Alberta Distance Learning Centre
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Your mark on this module will be determined by how well you do your assignments in this booklet.

Work slowly and carefully. If you are having difficulties, go back and review the appropriate section.

There are six section assignments in this assignment booklet. The total value of these assignments is 100 marks. The value of each assignment is stated in the left margin.

You may do your rough work on your own paper.

Be sure to proofread each assignment carefully.

Faxing? If you are using a facsimile machine to submit your work, be sure to fill in the information at the bottom of every response page.

FOR TEACHER'S USE ONLY

Summary

	Total Possible Marks	Your Mark
Section 1 Assignment	15	
Section 2 Assignment	17	
Section 3 Assignment	15	
Section 4 Assignment	15	
Section 5 Assignment	15	
Section 6 Assignment	23	
	100	

Teacher's Comments

15

Section 1 Assignment: Living Things

Read all the parts of your assignment carefully and record your answers in the appropriate places on the following response page.

1. Imagine that you are caring for a young child who has just come home from a party. The child was given a balloon at the party and asks you to blow it up. You do so, tie the balloon off, and gently throw it to the child. It bounces across the floor to the child. "Look," the child says, "it's alive! It grew to be big, and now it's moving all over the room."

   Maybe you'll decide not to spoil the fun by saying that the balloon is not alive even though it grew and moved. However, you should explain it to yourself. Write how you would explain that a balloon is not alive even though it grew and moved.

2. Now that you have spent quite a bit of time thinking about the characteristics of living things, consider the following situations and answer the questions.

   a. A ball bounces across the road. A rabbit hops across the road.

      (1) Which characteristic of life are both things showing?

      (2) Give two reasons why the ball is classified as non-living.

   b. A mousetrap snaps closed when the cheese is touched. A Venus flytrap plant snaps closed when an insect climbs inside.

      (1) Which characteristic of life are both things showing?

      (2) Give two reasons why the mousetrap is classified as non-living.

   c. A snowball grows larger. A young child grows taller.

      (1) Which characteristic of life are both things showing?

      (2) Give two reasons why the snowball is classified as non-living.

Section 1 Assignment: Response Page

1. _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

2. a. (1) _____

(2) _____

_____

b. (1) _____

(2) _____

_____

c. (1) _____

(2) _____

_____

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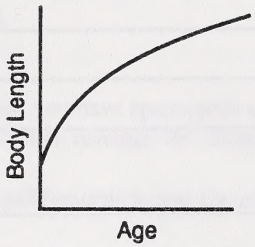
Section 2 Assignment: Growth Patterns

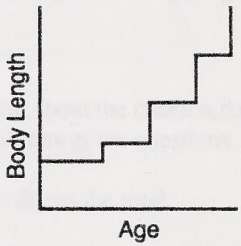
Read all the parts of your assignment carefully and record your answers in the appropriate places on the following response page.

1. Look closely at the following two graphs. They represent the growth patterns of two different organisms. One of the graphs shows the growth of an insect, and the other shows the growth of a mouse. Which is which?

Graph A



Graph B



2. A frog egg is laid in a pond in the early spring. Describe the changes that would take place as the egg hatches and grows over the spring and summer. Be sure to describe at least five stages of the animal as it grows beyond the egg stage.

Section 2 Assignment: Response Page

1. a. State what Graph A shows.

_____

b. State what Graph B shows.

_____

c. Explain why the two graphs have the different shapes shown.

_____

_____

_____

_____

2. _____

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Section 2 Assignment

3. It has been suggested that seeds will sprout best in the dark. How would you test this idea?

   Use the headings given on the following response page to explain what you would do.

Section 2 Assignment: Response Page

3. a. Materials You Need

b. Steps to Follow

c. Observations (What would you observe or measure?)

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Rough Work

(Marks will not be given for work done on this page.)

15

Section 3 Assignment: Variety of Life

Read all parts of your assignment carefully and record your answers in the appropriate places.

Examine the following diagrams of six flowers and then answer the questions that follow.

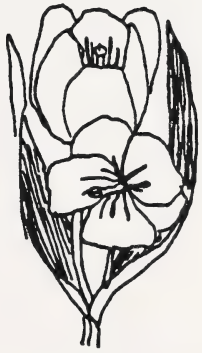
Begonia

Dandelion

Lily

Marigold

Morning Glory



Tulip

Section 3 Assignment

1. The flowers have been divided into two groups. Try to figure out what feature all the flowers in GROUP A have in common, but which flowers in GROUP B do not have.

GROUP A	GROUP B
dandelion	lily
marigold	tulip
	begonia
	morning glory

What characteristics found in GROUP A are different from the characteristics found in GROUP B?

2. The flowers have been divided into two different groups. Try to figure out what feature all the flowers in GROUP C have in common, but which the flowers in GROUP D do not have.

GROUP C	GROUP D
lily	dandelion
tulip	marigold
	begonia
	morning glory

What characteristics found in GROUP C are different from the characteristics found in GROUP D?

Section 3 Assignment: Response Page

1. _____

_____

_____

2. _____

_____

_____

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Section 3 Assignment

3. Another different way to group the flowers is shown.

GROUP E	GROUP F
morning glory	begonia
	dandelion
	marigold
	lily
	tulip

What characteristics found in GROUP E are different from the characteristics found in GROUP F?

4. Divide the flowers into two groups using characteristics you have chosen. List the groups under the headings *GROUP G* and *GROUP H*.

What characteristics found in GROUP G are different from the characteristics found in GROUP H?

Section 3 Assignment: Response Page

3. _____

_____

_____

4. GROUP G GROUP H

_____

_____

_____

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Section 4 Assignment: Structural Adaptations

Read all the parts of your assignment carefully and record your answers in the appropriate places on the response page.

For this assignment you will have the opportunity to be creative. You also will be able to use your knowledge about structural adaptations.

Imagine that you have just landed on another planet. Briefly describe the planet, including its temperature, light, available food sources, and type of land formations (hills, mountains, prairie, etc.). Then describe an animal or a plant that lives on this planet. Explain how structures of the plant or animal are adapted to its environment. Describe at least four ways in which it is adapted to the environment. Include a diagram if you wish.

Section 4 Assignment: Response Page

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Section 5 Assignment: Behavioural Adaptations

Read all the parts of your assignment carefully and record your answers in the appropriate places.

Example 1: In very hot weather people often seek out cool places and slow down their level of activity.

Example 2: On a cool sunny day an alligator spreads out as flat as it can on the shore.

Example 3: Tulips open on a sunny day and close again at night. Tulips stay closed during an overcast day.

In these examples each organism responds differently to the sun shining. For each example describe how the idea of *behavioural adaptation* explains this variety of behaviour.

Section 5 Assignment: Response Page

Example 1

Example 2

Example 3

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Section 6 Assignment: Stimulus and Response

Read all the parts of your assignment carefully and record your answers in the appropriate places.

Choose any animal with which you are familiar. A pet would be a good choice. Name the animal you have chosen and answer the following questions.

1. Describe one behaviour of the animal that could be classified as a learned response.

2. Give two observations that support your answer.

3. Describe one behaviour of the animal that could be classified as an instinctive response.

4. Give two observations that support your answer.

5. State a stimulus for the behaviour that you stated.

6. State two possible responses.

7. State two possible results.

8. Use the stimulus, possible responses, and possible results to make two linkages.

Section 6 Assignment: Response Page

The animal I have chosen is a _____.

1. _____

   _____

2. • _____
   • _____

3. _____

   _____

4. • _____
   • _____

5. _____

6. • _____
   • _____

7. • _____
   • _____

(Section 6 Assignment is continued on the next response page.)

Name of Student _____ Student I.D. # _____

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Rough Work

(Marks will not be given for work done on this page.)

Section 6 Assignment: Response Page

8. a. STIMULUS → RESPONSE → RESULT

_____ _____ _____

_____ _____ _____

b. STIMULUS → RESPONSE → RESULT

_____ _____ _____

_____ _____ _____

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